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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,478	09/27/2000	KOUCHIROU WAKABAYASHI	107454	7122

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,478

Applicant(s)

WAKABAYASHI ET AL.

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Applicants' responses of 5/21/03 & 6/24/03 have been considered with the following results.

Claim Objections

Claims 1-5 are objected to because of the following informalities: In claim 1, line 9 recites "the continuous magnetic layer"; however, such is not previously found. Appropriate correction is required.

The dependent claims fall with the parent claims because they do not clarify the above.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, claim 1 as now amended recites that the servo pattern and management data formed in the continuous magnetic layer. The examiner cannot readily ascertain/map where in the specification as originally filed such a disclosure/support is found. Applicants' cooperation is respectfully requested. The dependent claims fail to clarify the above and fall accordingly.

As far as the claims recite positive limitations, the following art rejections are made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art considered with either Cheung or the IBM Technical Disclosure Bulletin of March 1989.

The acknowledged prior art as discussed on pages 2-7 refer to the system of mo recording/writing wherein although the data layer is in the magnetic layer, there are pits in the disc structure that performs the positioning.

✓✓

✓ Either of the secondary references to Cheung or the March 1989 IBM Tech. Bulletin refers to systems wherein the positioning information (servo patterns) are also found in the same layer as the data. ✓✓

↓ It would have been obvious to modify the base system of the acknowledged prior art with the above teaching from either of the secondary references, motivation is to provide for a single magnetic recording layer having both the data and positioning information.

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The examiner concludes that the management data is also found in the acknowledged prior art, if such is not the case, then the examiner would rely upon such well known TOC formatting schemes and modification of the above documents therewith in order to have the appropriate management information as well for its inherent ability.

The limitation of claim 3 is considered met by the description of the acknowledged JP system ✓ discussed on page 5 in the specification. If such were not the case, then the examiner would rely upon Saga et al article for showing such.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3 above, and further in view of McDaniel et al.

The ability of using perpendicular magnetic film for the magnetic recording layer is well known as taught by the McDaniel et al document.

It would have been obvious to modify the base system as stated above with the above noted teaching and provide for the appropriate material, since selection of such is merely a substitution of one magnetic film over another.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3 above, and further in view of Official notice.

The shape of the magnetic marks as recited – rectangular – are considered merely a selection from a variety of shapes, oval, square, ellipsoid, etc., and selection of the shape is either a selection between alternative equivalents, or merely a desired shape for signal-optimization.

It would have been obvious to modify the base system as stated above with the above alternative shape ability; motivation is to have any desired signal shape.

5. Claim 5 is rejected under 103 (a) as being unpatentable over the art as applied to claims 1 and 3 and further in view of Official Notice.

The servo track in Cheung has a particular dimension. Either the track width of this track is

- a) as wide as the element that reads it,
- b) narrower than the element that read it,
- c) or wider than the element that reads it.

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Cheung does not clearly depict these variations in width. Nevertheless, variations of the servo pattern width are considered obvious to those of ordinary skill in the art. For instance when the track width is greater than (wider than) the width of the element that reads it, such provides for a better detection of the servo pattern and ensures proper positioning of the read/write elements.

It would have been obvious to modify the base system of the references as relied upon above with respect to claims 1 and 3 and modify the track width accordingly so as to better detect such a track.

- ✓ 6. Claims 6,7,9-12,14 and 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art further considered with either Cheung or the IBM Tech. Disclosure bulletin all considered with the Saga et al article and all further considered with Yanagawa et al.

Claim 6 is drawn to the apparatus for recording upon a MO disc having a combine optical & magnetic recording head arrangement and a magnetic reproducing head arrangement.

None of the references to the acknowledged prior art or Cheung or the IBM bulletin disclose such.

Such an arrangement is depicted in the Saga et al article.

- ✓ The claim also recites appropriate positioning elements for their desired results. Although there inherently is positioning elements in the above references, it is not clear that there are separate positioning elements for the respective heads. Yanagawa et al discloses/teaches in this environment the ability of having separate moving heads. ✓

It would have been obvious to modify the base system of the acknowledged prior art as modified by either Cheung/IBM article with the Saga et al article to have the appropriate head arrangement and further modify such with the teaching from Yanagawa et al so as to perform the appropriate recording and or reproducing at the positions desired. Such permits for the independent movement as required.

With respect to claim 7, Yanagawa et al also depicts a controller as recited – see figure 2.

With respect to claims 9-12 Saga et al depicts such.

The limitations of claim 14 are considered to be inherently present in the above combination of references.

Claims 16,17 and 19 are method claims equivalent to claims 6, 11 and 14 and are met when the above combined systems operate.

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7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 6,7, 9,10,12 and 14 above, and further in view of Official notice.

Claim 8 recites a second controller for its inherent control of the magnetic reproduction head. Although the Yanagawa et al references uses a single controller for both, the ability of having separate controllers, each dedicated for one particular head operation is considered merely a duplication of abilities, i.e., duplication of the controllers so as to perform appropriate dedicated control.

Such duplication of parts is considered an ability predicated on such considerations such as cost, availability, reliability etc. and obvious to those of ordinary skill in the art.

8. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 6,7,9-12,14,16,17 and 19 above, and further in view of JP 10-021598.

The examiner concludes that the JP document teaches the ability of varying the location of the reproducing heads accordingly – see paragraph ³¹33 of the English translation of the JP document.

It would have been obvious to modify the base system of the art as relied upon above with the above teaching from the JP document, motivation is considered an merely an alternative placing of the magnetic heads. Location of the heads is considered a relocation of parts and predicated upon such considerations as size, weight, stray magnetic fields, etc. and obvious to those of ordinary skill in the art, especially because no unexpected results are seen to occur therefrom.

9. Claims 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 6,7,9-12 and 14 above, and further in view of Official notice.

Although magnetic marks are created by the above system, the particular shape recited in claim 15 is not specifically mentioned. Nevertheless, the variation of the shape of the magnetic mark is considered merely an ability of the combined effects of the optical and magnetic fields. Various shapes of the recorded signal are considered well known and Official notice is taken thereof.

It would have been obvious to modify the base system of the references above with the ability to alter the shape of the recorded signal, motivation is considered merely a selection of equivalent shapes with no unexpected results occurring from such a selection.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. James et al is cited as also illustrative of having a magnetic servo pattern in the recording layer in a MO system.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Hard copies of the application files are now separated from this examining corps, hence the examiner can answer no questions that requires a review of the file without sufficient lead-time.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos



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Primary Examiner
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A handwritten signature in black ink, appearing to be 'P. H.', written over the printed name of the Primary Examiner.

AMP
Aug. 14, 2003